

## Claims

1. A process for preparing polyether polyols having an end block of ethylene oxide by addition of alkylene oxides onto H-functional starter substances, in which
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- A) a polyether polyol precursor is prepared by means of double metal cyanide (DMC) catalysis in a semicontinuous mode of operation in which previously prepared polyether polyol together with the DMC catalyst are placed in a reactor and H-functional starter substance and propylene oxide are added continuously,
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- B) the polyether polyol precursor from stage A) is reacted with propylene oxide or an ethylene oxide/propylene oxide mixture in the presence of the DMC catalyst in a continuously operating reactor to give a polyether polyol intermediate,
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- C) the intermediate from stage B) is mixed with an alkali metal hydroxide as catalyst and
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- D) reacted with ethylene oxide in a continuously operating reactor to give the final product,
- E) the catalyst is separated off from the final product obtained in stage D).
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2. A process according to claim 1, wherein the polyether polyol precursor prepared in stage A) has from 10 to 80% of the molar mass of the final product.
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3. A process according to claim 1 or 2, wherein the polyether polyol precursor prepared in stage A) has an OH number of from 50 to 400 mg KOH/g.
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4. A process according to any of claims 1 to 3, wherein the polyether polyol intermediate prepared in stage B) has from 50 to 95% of the molar mass of the final product.

5. A process according to any of claims 1 to 4, wherein stage B) is carried out in a continuously operated stirred tank reactor (CSTR).
- 5 6. A process according to any of claims 1 to 4, wherein stage B) is carried out in a continuously operated jet loop reactor having internal heat exchanger tubes.
7. A process according to any of claims 1 to 4, wherein stage B) is carried out  
10 in a continuously operated, completely filled circulation reactor.
8. A process according to any of claims 1 to 7, wherein the catalyst suitable for ethoxylation is selected from among KOH, amines and Lewis acids.
- 15 9. A process according to claim 8, wherein the catalyst is separated off from the final product in stage E) by adding water to the reaction mixture obtained in stage D and effecting phase separation in a coalescer.